

Work Order ID **56795-2**

March 10, 2010 11:55:34 AM



Split

Page 1

Item ID: D2011-101

Revision ID:

Item Name: 6" Mirror

Start Date: 3/10/10

Required Date: 3/16/10

Reference:

Approvals: Process Plan: *CZ*

QC:

Date: *10/31/10* Tooling:

Date: SPC (Y/N):

Date:

Date:

Setup Start

Stop

Run Start

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2011

Rev G

0.00

0.00

0.00

0.00

0.00

0.00

CZ 10/3/10 50

CZ 10/3/11 50

count
(x33)

(x4)

Pb ->

50603/30

y

100



Purchasing

Purchasing

PURCHASING

Memo

Issue P/O: *11489* Mirror P/N: C11M10601 Possible supplier:
Auto Parts Extra! Material release note required

110



Packaging

Packaging

Receive & Inspect for Damage & Mat'l Certs

Memo

Ensure material certification is attached

120



QC

Quality Control

QC6- Inspect dimensions to drawing

Memo

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2011-101 PAR #: _____ Fault Category: Supplier NCR: Yes No DQA: _____ Date: 1004-08
 Resolution: Scrap Disposition: return to supplier QA: N/C Closed: _____ Date: 10/07/21

NCR: <u>56795-2</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
10/3/12	# 120	During inspection Found Qty x1 mirror fell apart in the original Packag from supplier R.C. Defect: No taper on the backing circumference		→ inform supplier of issue and ask for Refun or credit. + Return Defective mirror Back.	10/3/12	 10/03/30		 10/03/12
				Pull test each mirror to SOLSS to ensure remainder is good.	 10/03/30	 10/03/30		 10-03-15
				During Pull test Qty x4 mirrors Pulver apart Re inform supplier of issue	 10/03/30	 10/03/30	 10-03-30	 10/03/30

NOTE: Date & initial all entries

Work Order ID 56795 - 2

March 10, 2010 11:55:34 AM



Item ID: D2011-101

Revision ID:

Item Name: 6" Mirror

Start Date: 3/10/10

Required Date: 3/16/10

Reference:

Accept



Setup Start



Stop



Start Qty: 50.00

Req'd Qty: 50.00



Cust Item ID:

Customer:

Run Start



Stop



Date:

Tooling:

Date:

Date:

SPC (Y/N):

Date:

Approvals:

Process Plan:

QC:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130



Small Fab

Small Fab

Small Fab

Memo

1- Wrap mirror with plastic wrap

2- Discard Hardware & Install new hardware loosely

3- Crimp stud as per Dwg D2011

QC5- Inspect part completeness to step on W/O

Memo

4- Test assembly to 50lbs pull test after 24 hours

140



QC

Quality Control

150



Packaging

Packaging

Identify as per dwg & Stock Location: 51232 0.00

Memo

0.00

9/5/10/03/30

334

PTO ->

5/6/03/30

count
(x33)

x2

CL 10/3/31

31
X

W/O: *		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2011-101 PAR #: _____ Fault Category: Small fab NCR: Yes No DQA: _____ Date: 1004-08
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: _____ Date: 10/07/21

NCR: <u>56795-2</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
<u>10/3/30</u>	<u>#130</u>	<u>two mirrors Found with markings / scratches on them</u>	<u>[Signature]</u>	<u>-Scrap + Destroy Qty 2 - Ensure mirrors are well protected & verified after each activity.</u>	<u>S</u> <u>10/03/30</u>	<u>PD</u> <u>10.03.30</u>	<u>[Signature]</u>	<u>S</u> <u>10/03/30</u>

NOTE: Date & initial all entries

Work Order ID 56795

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Item ID: D2011-101

Accept



Setup Start



Revision ID:

Stop



Item Name: 6" Mirror

Start Date: 3/10/10 Start Qty: 50.00



Cust Item ID:

Required Date: 3/16/10 Req'd Qty: 50.00



Customer:

Reference:

Run Start



Approvals:

Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Draw
Number

Draw
Rev.

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

QC

Memo

0.00

Quality Control

10/04/07 *[Signature]*

MF
10-4-6

Picklist Print

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Page 1

Work Order ID: 56795

Parent Item: D2011-101

Parent Item Name: 6" Mirror

Comments: IPP: J 04.09.15 Added Steps 5-7 KJ/JLM IPP:
K 05.12.15 chg black sikaflex for white EC IPP L 08.11.06 new
drawing EC verify: DD IPP: M 08.12.19 Added step 3 KJ Verified
by: LL IPP rev N 10.01.13 added wrap per ncr09-118 EC verified by:DD

Start Date: 3/10/10

Required Date: 3/16/10

Start Qty: 50.00

Required Qty: 50.00

AN960JD416L

Purchased

No

110

Each

653.0000 50.0000



Washer

QSI UAS1149D04161

M114056

33x

11053837

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST346

653

105078

4

107008

54

108583

35

110153

160

112492

400

CHM-10601

Purchased

No

130

Each

0.0000 50.0000



Mirror 6"

D2829

Manufactured

No

130

Each

24.0000 50.0000



Threaded Stud

Warehouse

Loc Qty

Loc Code

Location

Main Warehouse

ST25

24

54930

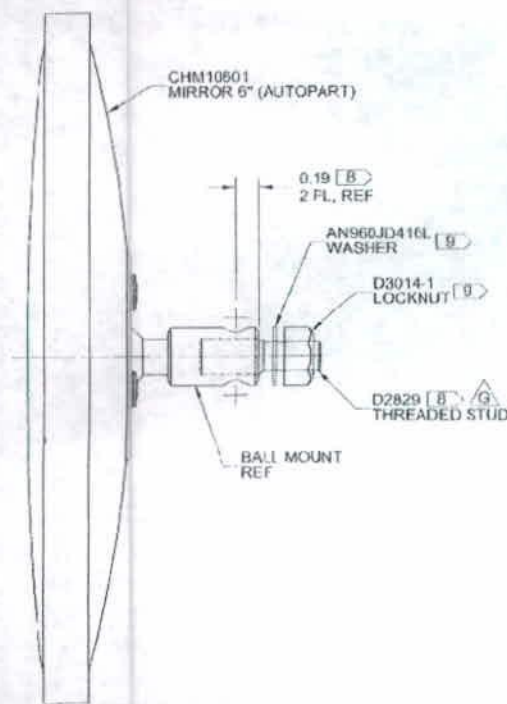
24

EP 10/03/30

EP 10/03/30

EP 10/03/30

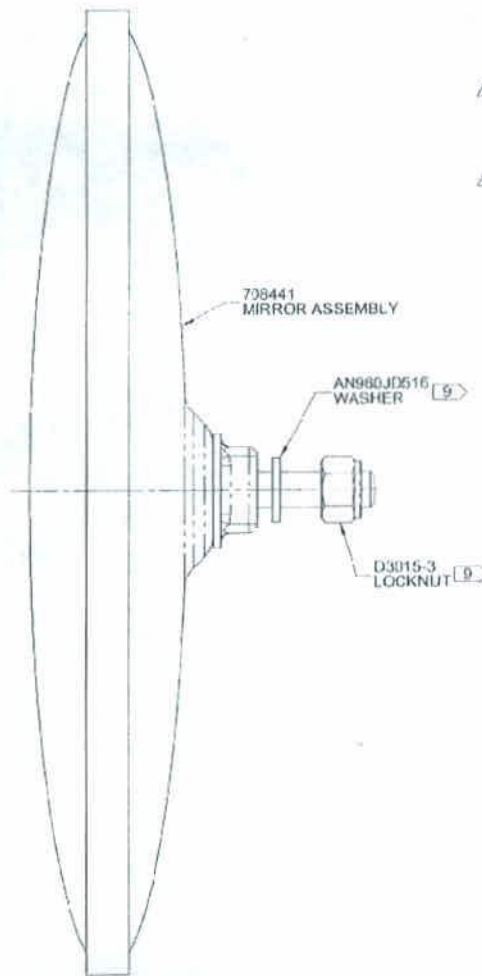
B56986 12x 24x



D2011-101 MIRROR ASSEMBLY 6"

c210/3110
w/10: 56 795

- NOTES:
- 1) MATERIAL: N/A
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: D2011-101 = 0.6 lbs APPROX.; D2011-103 = 1.0 lbs APPROX.
 - 8) D2829 INSTALLATION PROCEDURE:
 - APPLY LOCKTITE 262 TO $\phi 5/16$ END OF D2829
 - THREAD BY HAND INTO BALL MOUNT UNTIL ENTIRE $\phi 5/16$ END OF D2829 IS WITHIN BALL MOUNT
 - CRIMP BALL MOUNT ON TWO OPPOSING SIDES, 0.13 FROM END AS ILLUSTRATED USING TOOL DT8317
 - CRIMP TO DEPTH OF 0.040 \pm 0.010 USING R0.125
 - 9) INSTALL LOOSE



D2011-103 MIRROR ASSEMBLY 8"

ITEM	QTY -101	QTY -103	P/N	DESCRIPTION
1	X		D2011-101	MIRROR ASSEMBLY 6"
2		X	D2011-103	MIRROR ASSEMBLY 8"
3	1		D2829	THREADED STUD
4	1		D3014-1	LOCKNUT
5		1	D3015-3	LOCKNUT
6	1		CHM10801	MIRROR 6" (AUTOPART)
7		1	708441	MIRROR 8" (VELVAC)
8	1		AN960JD416L	WASHER
9		1	AN960JD516	WASHER

RELEASED
(18-10-29)

G	REDRAWN IN SOLIDWORKS TO CURRENT STANDARD AND TRANSFERRED TO "B" SHEET FORMAT. MIRROR 6" (AUTOPART) AND CHM10801 WERE MIRROR 6" (GROTE) AND PIN 28043 (28 D3-1) ADDED D2829 (28 D3-1 AND 78 C6-1) REMOVED DILLING NOTE, VIEW A-A AND "SINAPLEX APPLICATION NOTE" DISCONTINUED	MB	08.10.06
F	ADD HOLES FOR SEALANT ON -101	CP	04.09.10
E	NEW 8" MIRROR	CP	01.05.08
D	NEW 6" MIRROR, ADD NUT, REMOVED STUD	CP	01.04.23
C	REPLACE DOMINION AUTO MIRRORS WITH PHILLIPS, ADDED STUDS, REDRAWN	RT	09.06.01
B	SINAPLEX 241 ADDED	JB	08.04.09
A	DWG NO. WAS DSP1011, ADDED -103	JB	06.06.15
-	NEW ISSUE	JB	06.03.31
REV.	DESCRIPTION	BY	DATE
DESIGN	JB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D2011 TITLE MIRROR ASSEMBLY COPYRIGHT © 1990 BY DART AEROSPACE LTD <small>THIS DRAWING IS THE PROPERTY OF DART AEROSPACE LTD. IT IS TO BE USED ONLY FOR THE PURPOSES SPECIFIED HEREIN. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD.</small>	
DRAWN			
CHECKED			
MFG APPR			
APPROVED			
DE APPR		REV G SHEET 1 OF 1 SCALE NTS	
DATE	08.10.06		

Sub 1/30

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The authors have no financial or personal relationships with other people or organizations that could inappropriately influence or bias the work reported in this paper.

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DART AEROSPACE LTD.
1270 ABERDEEN STREET
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ON RGA 1K7

50 TMD CODE PART NO / PRECIS

0601
TWD
46459
PATA
REFCUIAR
PIECES/CORE
08/03/11
30V: TWD
0 CONY MITOIT

TOTAL	0.00	DEC / DEC	0.00	FEB / THANK	0.00	GST / TPE	47.
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0.00	0994.88
PST/TAG	AMT to PAY / A PAYEE

DATE 3/11/10
07:48
111 HLP
PO: 11489
COT/ANT
18.95
947.50
0.00
0.00

Signature

